

in which

M^1 is a metal from group IVb, Vb or VIb of the Periodic Table

R^1 and R^2 are identical or different and are a hydrogen atom, a C_1 - C_{10} -alkyl group, a C_1 - C_{10} -alkoxy group, a C_6 - C_{10} -aryl group, a C_6 - C_{10} -aryloxy group, a C_2 - C_{10} -alkenyl group, a C_7 - C_{40} -arylalkyl group, a C_7 - C_{40} -alkylaryl group, a C_8 - C_{40} -

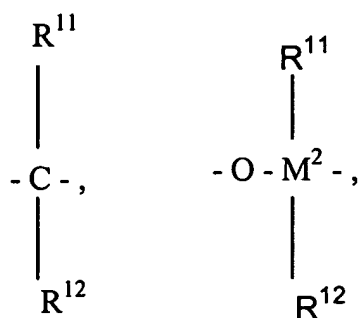
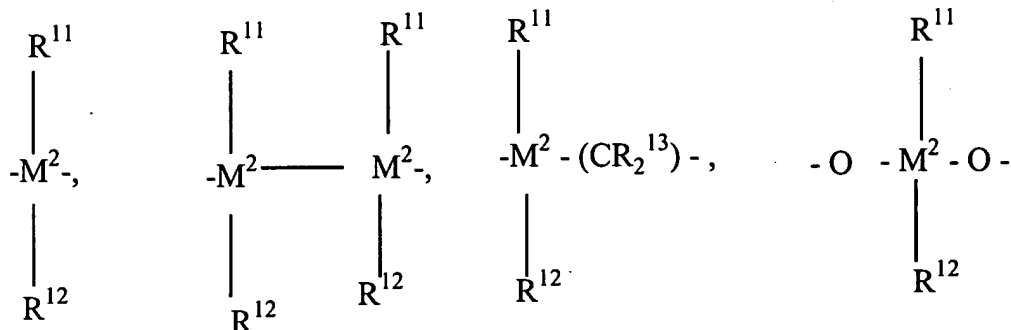
arylalkenyl group or a halogen atom,

R^3 is a hydrogen atom, a halogen atom, a C_2 - C_{10} -alkyl group, a C_1 - C_{10} -alkyl group which is halogenated, a C_6 - C_{10} -aryl group, an $-NR_2^{15}$, $-SR^{15}$, $-OSiR_3^{15}$, $-SiR_3^{15}$ or $-PR_2^{15}$ radical in which R^{15} is a halogen atom, a C_1 - C_{10} -alkyl group or a C_6 - C_{10} -aryl group.

[R^3 and] R^4 [are identical or different and are] is a hydrogen atom, a halogen atom, a C_1 - C_{10} -alkyl group, which is optionally halogenated, a C_6 - C_{10} -aryl group, an $-NR_2^{15}$, $-SR^{15}$, $-OSiR_3^{15}$, $-SiR_3^{15}$ or $-PR_2^{15}$ radical in which R^{15} is a halogen atom, a C_1 - C_{10} -alkyl group or a C_6 - C_{10} -aryl group,

R^5 and R^6 are identical or different and are as defined for R^3 and R^4 , with the proviso that R^5 and R^6 are not hydrogen,

R^7 is



$=BR^{11}, =AlR^{11}, -Ge-, -Sn-, -O-, -S-, =SO, =SO_2, =NR^{11}, =CO, =PR^{11}$ or $=P(O)R^{11}$,

where

R^{11}, R^{12} and R^{13} are identical or different and are a hydrogen atom, a halogen atom, a C_1-C_{10} -alkyl group, a C_1-C_{10} -fluoroalkyl group, a C_6-C_{10} -aryl group, a C_6-C_{10} -fluoroaryl group, a C_1-C_{10} -alkoxy group, a C_2-C_{10} -alkenyl group, a C_7-C_{40} -arylalkyl group, a C_8-C_{40} -arylalkenyl group or a C_7-C_{40} -alkylaryl group, or a pair of substituents R^{11} and R^{12} -- or R^{11} and R^{13} in each case with the atoms connecting them, form a ring,

M^2 is silicon, germanium or tin,

R^8 and R^9 are identical or different and are as defined for R^{11}

m and n are identical or different and are zero, 1 or 2, m plus n being zero, 1 or 2,
[and]

the radicals R^{10} are identical or different and are as defined

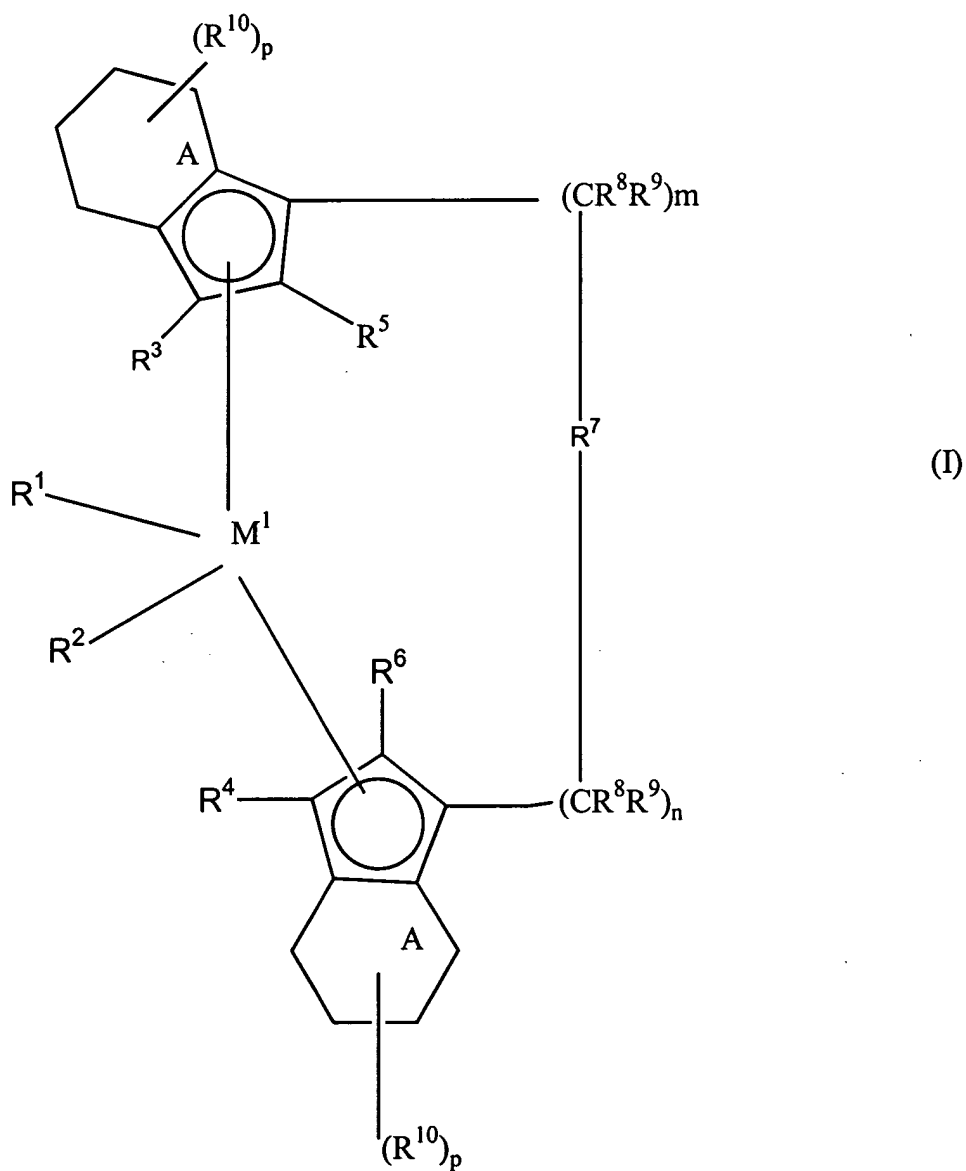
for R^{11}, R^{12} and R^{13} ,

rings A are saturated or aromatic.

p is 8, when rings A are saturated, and

p is 4, when rings A are aromatic.

7. A compound [as claimed in claim 1,] of the formula (I) for preparing essentially isotactic olefin polymers



in which

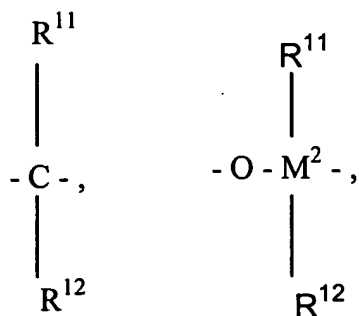
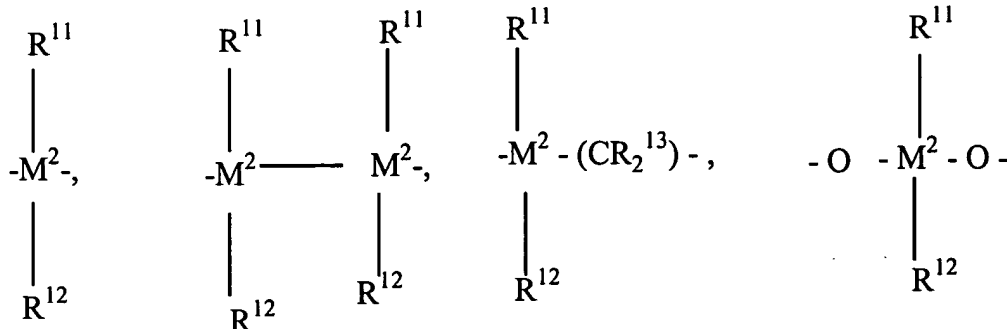
M¹ is a metal from group IVb, Vb or VIb of the Periodic Table

R¹ and R² are identical or different and are a hydrogen atom, a C₁-C₁₀-alkyl group, a C₁-C₁₀-alkoxy group, a C₆-C₁₀-aryl group, a C₆-C₁₀-aryloxy group, a C₂-C₁₀-alkenyl group, a C₇-C₄₀-arylalkyl group, a C₇-C₄₀-alkylaryl group, a C₈-C₄₀-arylalkenyl group or a halogen atom,

R³ and R⁴ are hydrogen,

R⁵ and R⁶ are identical or different and are a halogen atom, a C₁-C₁₀-alkyl group, which is optionally halogenated, a C₆-C₁₀-aryl group, an -NR₂¹⁵, -SR¹⁵, -OSiR₃¹⁵, -SiR₃¹⁵ or -PR₂¹⁵ radical in which R¹⁵ is a halogen atom, a C₁-C₁₀-alkyl group or a C₆-C₁₀-aryl group

R⁷ is



$=BR^{11}, =AlR^{11}, -Ge-, -Sn-, -O-, -S-, =SO, =SO_2, =NR^{11}, =CO, =PR^{11}$ or $=P(O)R^{11}$,

where

R^{11}, R^{12} and R^{13} are identical or different and are a hydrogen atom, a halogen atom, a C_1-C_{10} -alkyl group, a C_1-C_{10} -fluoroalkyl group, a C_6-C_{10} -aryl group, a C_6-C_{10} -fluoroaryl group, a C_1-C_{10} -alkoxy group, a C_2-C_{10} -alkenyl group, a C_7-C_{40} -arylalkyl group, a C_8-C_{40} -arylalkenyl group or a C_7-C_{40} -alkylaryl group, or a pair of substituents R^{11} and R^{12} or R^{11} and R^{13} in each case with the atoms connecting them, form a ring,

M^2 is silicon, germanium or tin,

R^8 and R^9 are identical or different and are as defined for R^{11}

m and n are identical or different and are zero, 1 or 2, m plus n being zero, 1 or 2,

the radicals R^{10} are identical or different and are as defined

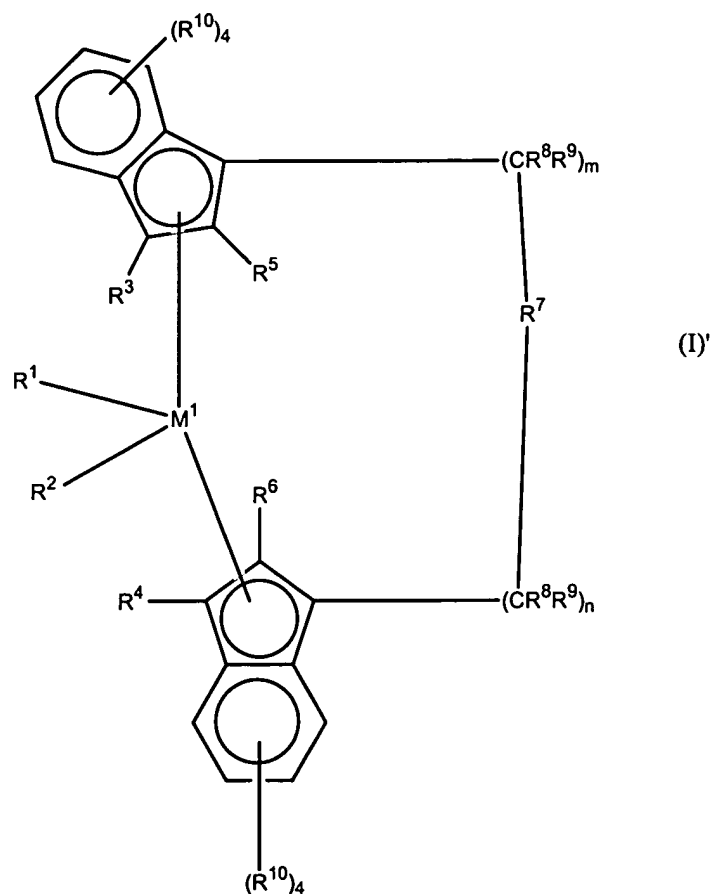
for R^{11}, R^{12} and R^{13} ,

rings A are saturated or aromatic,

p is 8, when rings A are saturated, and

p is 4, when rings A are aromatic.

19. A compound of the formula (I)'



in which

M¹ is a metal from group IVb, Vb or VIb of the Periodic Table.

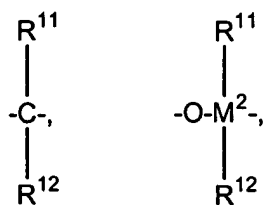
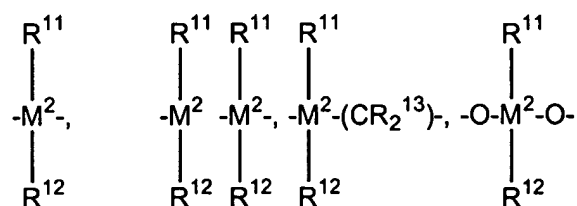
R¹ and R² are identical or different and are a hydrogen atom, a C₁-C₁₀-alkyl group, a C₁-C₁₀-alkoxy group, a C₆-C₁₀-aryl group, a C₆-C₁₀-aryloxy group, a C₂-C₁₀-alkenyl group, a C₇-C₄₀-arylalkyl group, a C₇-C₄₀-alkylaryl group, a C₈-C₄₀-arylalkenyl group or a halogen atom.

R³ is a hydrogen atom, a halogen atom, a C₂-C₁₀-alkyl group, a C₁-C₁₀-alkyl group which is halogenated, a C₆-C₁₀-aryl group, an -NR₂¹⁵, -SR¹⁵, -OSiR₃¹⁵, -SiR₃¹⁵ or -PR₂¹⁵ radical in which R¹⁵ is a halogen atom, a C₁-C₁₀-alkyl group or a C₆-C₁₀-aryl group,

R⁴ is a hydrogen atom, a halogen atom, a C₁-C₁₀-alkyl group, which is optionally halogenated, a C₆-C₁₀-aryl group, an -NR₂¹⁵, -SR¹⁵, -OSiR₃¹⁵, -SiR₃¹⁵ or -PR₂¹⁵ radical in which R¹⁵ is a halogen atom, a C₁-C₁₀-alkyl group or a C₆-C₁₀-aryl group,

R⁵ and R⁶ are identical or different and are as defined for R³ and R⁴, with the proviso that R⁵ and R⁶ are not hydrogen,

R⁷ is



=BR¹¹, =AlR¹¹, -Ge-, -Sn-, -O-, -S-, =SO, =SO₂, =NR¹¹, =CO, =PR¹¹ or =P(O)R¹¹,

where

R¹¹, R¹² and R¹³ are identical or different and are a hydrogen atom, a halogen atom, a C₁-C₁₀-alkyl group, a C₁-C₁₀-fluoroalkyl group, a C₆-C₁₀-aryl group, a C₂-C₁₀-alkenyl group, a C₇-